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30 April 2004

Mr. Scott Hansen
Work Assignment Manager
U.S. Environmental Protection Agency
77 West Jackson Blvd.
Chicago, IL 60604

U.S. EPA Contract No.: 68-W7-0026
Work Assignment No.: 148-ROBE-05BN
Document Control No.: RFW148-2A-APPK

Re: Oversight Report for Lenz Oil Site, Lemont, Illinois

Dear Mr. Hansen:

Weston Solutions, Inc. (WESTON®) is pleased to submit the oversight report for the Lenz Oil Site, Lemont , Illinois. The oversight report is for the period from 23 January through 7 April 2004.

The attached oversight report provides WESTON's summary of the daily observations of the PRP's field activities, copies of field notes, and photo-documentation of field activities.

If you have questions, please call me at (847) 918-4051.

Very truly yours,

WESTON SOLUTIONS, INC.

Omprakash S. Patel
Site Manager

OSP:ld

I:WO\RAC\148\33952LTR.WPD RFW148-2A-APPK

PERIODIC OVERSIGHT REPORT
23 JANUARY 2004 THROUGH 7 APRIL 2004
LENZ OIL
LEMONT, ILLINOIS

April 2004

Prepared for:

U.S. Environmental Protection Agency

Work Assignment No.:148-ROBE-05BN
Document Control No.:RFW148-2A-APPK

OVERSIGHT OF PRE-DESIGN FIELD INVESTIGATION
LENZ OIL
LEMONT, ILLINOIS

This report summarizes the field oversight for the pre-design field investigation by Conestoga-Rovers and Associates (CRA) at Lenz Oil, Lemont, Illinois. This report covers the period between 23 January through 7 April 2004. Weston Solutions, Inc. (WESTON®) provided oversight for the pre-design field investigations performed by CRA. One WESTON personnel was present on-site during the pre-design field investigations. Photo documentation and copies of the field log book are attached.

23 January 2004

The following personnel were present on-site:

Name	Affiliation
Walter Pochron	CRA
Jeff Kolodziejski	CRA
Christy Gerges	CRA
Naveen Agarwal	CRA
Walt Pochron	CRA
Yoshie Hagiwara	WESTON

On 23 January 2004, water levels measurements were collected by the PRPs using an electrical-sounding oil/water interface probe. In addition, the thickness of LNAPL was measured using the oil/water interface probe where free product was observed. CRA also collected the total depth at wells where no free product was observed. Piezometers P-05, P-25 and P-25S could not be accessed due to frozen cap covers. Piezometer P-34 was open when CRA approached the location. The piezometer appeared to have been bumped or hit and the well cap was missing as the CRA personnel collected the water level measurement at P-34. The piezometer appeared to be usable without much obvious damage, and CRA placed the cap back on (which was found on the ground) after the depth-to-water (DTW) measurement was taken from the well. Other than the problems mentioned above, no deviations from the work plan were observed on 23 January 2004.

CRA also collected groundwater samples for a treatability study. Groundwater samples were analyzed for the following:

- Total organic carbon (TOC);
- Total suspended solids (TSS);

- Dissolved calcium, magnesium, and iron;
- Volatile organic compounds (VOCs);
- Polyaromatic hydrocarbons (PAHs); and
- Polycholrinated biphenyls (PCBs).

The samples were sent to Severn Trent Laboratories in North Canton, Ohio for analysis.

After collecting approximately 20 gallons of treatability study samples, CRA field manager Walt Pochron decided that a modification to the sampling method was necessary. The plan was to remove some of the LNAPL prior to groundwater sample collection so that the height of water column would be greater (because LNAPL that is sitting on top of the water column would be removed, thereby creating more space for the water to enter the well). WESTON suggested to CRA that they should get approval from the U.S. EPA since they were going to evacuate LNAPL. CRA ceased sampling activities for the day to discuss the modifications with the U.S. EPA.

3 February 2004

The following personnel were present on-site:

Name	Affiliation
Walter Pochron	CRA
Jeff Kolodziejski	CRA
Mike Mueller	(Boart Longyear-Driller)
Kevin Wise	(Boart Longyear- Helper)
Yoshie Hagiwara	WESTON

Per the amendment to the work plan (dated 13 January 2004), CRA installed two piezometers to monitor the zone of influence during the groundwater pump test. CRA performed appropriate air monitoring for the workers on-site during drilling and piezometer installation activities of PZ-42 and PZ-43. CRA also collected approximately 10 gallons of groundwater from VER-2 for treatability test purposes. During the collection, approximately 5 gallons of free product (LNAPL) was removed from VER-2 well.

CRA did not have any plans for secondary containment for the LNAPL purged from VER-2. WESTON reported this to Mr. Scott Hansen, the U.S. EPA RPM. After the communication between the U.S.EPA and CRA project managers, CRA agreed to double-containerize the LNAPL. For temporary measures, CRA decided to store a 5-gallon bucket inside of a drum to provide double-

containerization. CRA ordered three over-pack drums for the long-term storage of LNAPL.

No other deviation to the work plan was observed.

16 February 2004

The following personnel were present on-site:

Name	Affiliation
Walter Pochron	CRA
Tim Ree	CRA
Tom Hobday	CRA
Yoshie Hagiwara	WESTON

On 16 February 2004, CRA collected water and LNAPL elevation measurements from the following wells and piezometers:

- PZ-36
- PZ-37
- PZ-39
- PZ-42
- PZ-43
- P-19
- P-20
- P-21, and
- VER-2

While on site, WESTON also learned that the LNAPL that was temporarily containerized in a 5-gallon bucket inside of a 55-gallon drum was transferred to a 55-gallon drum inside of an over-pack drum.

No deviation from the work plan was observed.

17 February 2004

The following personnel were present on-site:

Name	Affiliation
Walter Pochron	CRA
Tim Ree	CRA
Tom Hobday	CRA
Yoshie Hagiwara	WESTON

On 17 February 2004, CRA started the step-test at the pumping rate of 1 gallon per minute (gpm). CRA lowered the pumping rate to approximately 0.5 gpm half an hour later due to problems with slow recharge at the VER-2 well. Due to the nature of the 2-inch Grundfos pump used for the test, the flow rate fluctuated between 0.45 and 0.55 gpm. The top of fluid (oil/water) stabilized approximately 3.5 hours into the test. The step-test was terminated approximately four hours from the start of the test.

No deviation from the work plan was observed.

18 February 2004

The following personnel were present on-site:

Name	Affiliation
Walter Pochron	CRA
Tim Ree	CRA
Tom Hobday	CRA
Tim Leo	CRA
Christy Gerges	CRA
Yoshie Hagiwara	WESTON

On 18 February 2004, CRA performed a constant-rate pumping test at well VER-2. The test started at 08:27 at a pumping rate of 0.5 gpm. The pumping rate fluctuated between 0.5 and 0.55 gpm due to the variability cause by the Grundfos pump. The response observed in water-level-monitoring wells and piezometers was not uniform, perhaps indicating groundwater flow through a fractured medium.

No deviation from the work plan was observed.

19 February 2004

The following personnel were present on-site:

Name	Affiliation
Walter Pochron	CRA
Tim Ree	CRA
Tom Hobday	CRA
Yoshie Hagiwara	WESTON

On 19 February 2004, CRA terminated the 24-hour constant-rate pump test and continued to perform the VER pilot test at the VER-2 well. Prior to the start of the VER pilot test, CRA purged approximately 1.5 gallons of water from vapor monitoring points VMP-5, VMP-6, and VMP-7, and approximately 1.5 gallons of LNAPL from VMP-8. CRA calibrated the photo-ionization detector (PID), flame ionization detector (FID), and landfill gas analyzer prior to the start of the test. The VER pilot test started at 10:01 at maximum vacuum while the Grundfos pump stayed at 0.5 gpm in the background. A relatively quick response was observed at P-20 and VMP-8. At 10:37, the combined flow from VER-2 was approximately 3.5 gpm without much air flow. At 11:15, CRA increased the Grundfos pumping rate to 3 gpm to reduce the amount of groundwater purged into the vacuum unit. The vacuum was stable at 13:07, however CRA decided to continue the pilot testing until approximately 16:00 to ascertain that the aquifer drained and resulted in increased air flow. CRA also collected a one-hour discharge air sample in a Summa canister. The sample was analyzed using method TO-14. The VER pilot test was terminated at 16:10, approximately six hours after the start of the test. The final pressure readings showed the sign of influence at VMP-8 and P-20 but not at any other monitoring wells. CRA started the recovery test at 16:57. Water (LNAPL) level recovery data were collected from VER-2 and PZ-43.

No deviation from the work plan was observed.

20 February 2004

The following personnel were present on-site:

Name	Affiliation
Walter Pochron	CRA
Tim Leo	CRA
Yoshie Hagiwara	WESTON

CRA decontaminated the Grundfos pump and some of the data loggers used during the tests from the previous days and containerized oily decontamination water (sheen on top) into a 55-gallon drum. CRA planned to pump out the LNAPL from the Baker tank to a drum, however when the thickness of the LNAPL was measured (~0.01 ft), CRA determined that the volume of LNAPL is not sufficient to pump out. CRA decided to place oil absorbent booms inside the tank, and let all the LNAPL absorb onto the boom over the weekend.

No deviation from the work plan was observed.

02 March 2004

The following personnel were present on-site:

Name	Affiliation
Tim Leo	CRA
Jeff Kolodzieski	CRA
Yoshie Hagiwara	WESTON

On 02 March 2004, CRA pumped out the purge water stored in a Baker tank through a CarbonAir® carbon filtration unit (in a drum) into a water truck operated by Beaver Oil of Hodgkins, Illinois. The filtered water was transported and discarded by Beaver Oil. CRA sampled the tank water in three 40 mL vials preserved with hydrochloric acid and two 40 mL vials preserved with sulfuric acid. When asked what parameters these samples were going to be analyzed for, CRA field personnel were unable to answer. Later, when Walt Pochron, CRA field manager was contacted regarding the samples, he explained that the samples were collected to compare with the analytical results collected from VER-2 previously. This is to address the U.S. EPA's concern that the sample water from VER-2 well (collected on 23 January 2004) may not be representative of the discharge water generated during VER pilot testing. However, the number and types of samples collected on 02 March 2004 did not match the number and types of samples collected previously (on 23 January

2004) therefore, it is expected that the analytical data (from the tank) would be available for only a limited number of analytes. On 02 March 2004, CRA planned on decontaminating the tank and discarding the decontamination water into Beaver's tank (to be hauled off-site by Beaver). However, due to the malfunction of the pressure washer unit, CRA was unable to complete decontamination of the tank. It is WESTON's understanding that CRA will be back on site to complete the decontamination and discard the discharge water appropriately at a later date.

WESTON personnel also noted that the entrance of the site gate was secured by a plastic fencing material. Due to the hard surficial material, CRA was not able to re-stake the poles for the metal fence.

No deviation from the work plan was observed.

12 March 2004

The following personnel were present on-site:

Name	Affiliation
Jeff Kolodzieski	CRA
Tim Leo	CRA
Yoshie Hagiwara	WESTON

CRA attempted to decontaminate the Baker tank used to store purge water from pump test and VER pilot test. However, due to the cold temperatures, both the outlet valve on the tank and the oil/water inside the tank were frozen. CRA decided to postpone the decontamination activities for sometime later.

No field activities took place on 12 March 2004.

02 April 2004

The following personnel were present on-site:

Name	Affiliation
Jeff Kolodzieski	CRA
Tim Leo	CRA
Yoshie Hagiwara	WESTON

On 02 April 2004, CRA decontaminated the Baker tank which was used to store purge water from well VER-2 during pump testing and VER pilot testing activities. The interior of the tank was decontaminated using a pressure washer. Pressure wash by plain (potable) water followed the pressure-washing using Alconox-water solution. No problem was observed during the decontamination activities. However, during the decontamination activities, some LNAPL leaked into the tank's secondary containment rain water had collected. CRA decided not to containerize this contaminated water because they did not have enough drums to containerize all the contaminated water in the secondary containment. WESTON immediately informed the U.S. EPA about CRA's decision not to containerize the contaminated water within the secondary containment.

07 April 2004

The following personnel were present on-site:

Name	Affiliation
Jeff Kolodzieski	CRA
Tim Leo	CRA
Walter Pochron	CRA
Robert Majchrzak	WESTON

On 7 April 2004, CRA pumped out the water that was mixed with LNAPL in the secondary containment surrounding the Baker tank. The Baker tank is located on the south side of Jeans Road on private property. The water/oil mixture was pumped through a CarbonAir® carbon filtration unit (in a drum) into a water tanker truck operated by Beaver Oil of Hodgkins, Illinois. The filtered water was transported and discarded by Beaver Oil. The operator for Beaver Oil reported approximately 600 gallons of water was collected from the secondary containment area. Following the removal of the water/oil mixture, CRA decontaminated the secondary containment with alconox and water.

CRA also transferred water from the drums located on the north side of Jeans Road to the tanker

truck operated by Beaver Oil. This water was generated from well development and well sampling procedures. Oil that collected on the top of the water was first skimmed-off and transferred to the oil drums located on-site. The water was pumped to a 1,500-gallon poly tank. From the poly tank the water was pumped through a CarbonAir® carbon filtration unit (in a drum) into the tanker truck. According the operator for Beaver Oil, approximately 200 gallons of water was collected from the north side of Jeans Road.

No deviation from the tasks outlined in a CRA letter dated 6 April 2004 to the U.S. EPA was observed on 7 April 2004.

PHOTO-DOCUMENTATION

Well piezometer configuration, with PZ-43 included, looking east (2/16/04; 14:05)

Piezometer PZ-42, looking west (2/16/04; 14:08)

Pump, tubing, and sensor inside VER-2 (2/17/04; 9:34)

Setting up the pump system (connection) at VER-2 (2/17/04; 10:02)

Grundfos pump controller, button control at VER-2 (2/17/04; 11:00)

Data loggers for pump testing at VER-2 (2/17/04; 12:41)

New flow meter (0-1gallon scale) installed (2/17/04; 13:23)

Prior to starting 24-hour pump test at VER-2 (2/18/04; 7:40)

VER test set-up (2/19/04; 8:28)

VER pilot testing (2/19/04; 10:05)

Monitoring outflow pressure during VER pilot testing (2/19/04; 10:07)

Taking vapor pressure measurement at VMP-5 (2/19/04; 10:13)

Collecting summa-can VOC air sample from the discharge outlet (2/19/04; 13:10)

COPIES OF FIELD NOTES

WELL ID	DTW	DTO	TD	Comments
P31	4.74		12.41	
P32	8.42		18.47	
G101L	16.62		34.27	
G101D	16.67		40.98	
G101M	17.34		23.58	
G102S	9.24		17.24	
G102D	10.15		21.58	
G102L	9.09		16.71	
G104L	8.31		16.41	
G104D	~~11.60~~	4.03 10.60	~~47.39 46.60~~	
G106D	11.44		47.39	
G106L	13.22	9.50		
MW1D	9.56		48.64	
MW1S	8.14		20.80	
MW2D	10.28		45.89	
MW2S	9.14		15.85	
MW3D	6.34		47.42	
MW3S	6.55		21.52	
MW4S	6.55		21.73	
MW4D	10.28		45.89	
MW5D	11.92		49.38	
MW5S	9.79	9.76		
MW6S	1.73		11.54	
MW6D	4.64		~~29.39~~	45.96
MW7D	16.42		57.23	
MW7S	16.73		35.07	
MW8S	8.20		23.71	
MW104L	8.31		/	
MW104D	4.03		10.60	
SG1	22.48			
VER1	9.68	~~19.10~~	19.10	
VER2	13.15	11.77		

Water level measurements & treatability water sampling.
Y. Hagiwara

1/23/04

0825 Weston (T. Hagiwara) on site. Cloudy & cold ~ 15°F.

0830 At VER-2. CRA Jeff, Christy Georges, and Nareen Agarwal are already on site. They are ~~21.58~~ VER-2 with 2 peristaltic pumps. ~~2 (1 pump)~~. ~~They~~ will be sampling ~~VER-2 weekly for~~ treatability studies.

0858 Asked CRA what they are sampling the GW for.
- TOC — ~~Ed.01~~ 22.81
- TSS
- dissolved Ca-, Mg & Fe
- VOCs
- PAH ~~81.54~~ — 22.5
- PCB ~~32.15~~ — 85.8.

0905 Start sampling VER-2 in a Gallon plastic container (for Treatability study).

0924 Start collecting water level meas

Note: There was quite a bit of product that was purged prior to the start of sampling.

0953 At G101 area. The area of G101 has been cleared of bushes & trees. CRA was not aware of this.

1115 ~~PZ-34 appeared to have been bumped~~ ~~or something. The cap was off the pz.~~ But we ~~pl~~ pulled back after POV

1130 Taking a warm-up break & supply refill. The decon water bottle is frozen.

1150-200 Picked up lunch.

WELL ID	DTW	DTO	TD	Comments
P31	4.74		12.41	
P32	8.42		18.47	
G101L	16.62		34.27	
G101D	16.67		40.98	
G101M	17.34		23.58	
G102S	9.24		17.24	
G102D	10.15		21.58	
G102L	9.09		16.71	
G104L	8.31		16.41	
G104D	~~17.60~~	4.03 10.60	~~47.39 16.60~~	
G106D	11.44		47.39	
G106L	13.22	9.50		
MW1D	9.56		48.04	
MW1S	8.14		20.80	
MW2D	10.28		45.89	
MW2S	9.14		15.85	
MW3D	6.34		47.42	
MW3S	6.55		21.52	
MW4S	6.55		21.73	
MW4D	10.48		45.89	
MW5D	11.92		49.38	
MW5S	9.79	9.76		
MW6S	1.73		11.54	
MW6D	4.64		~~29.39~~	45.96
MW7D	16.42		57.23	
MW7S	16.73		35.07	
MW8S	8.20		23.71	
MW104L	8.31			
MW104D	4.03		10.60	
SG1	22.48			
VER1	9.16	~~19.10~~	19.10	
VER2	13.15	11.77		

Water level measurements & treatability water sampling.
Y. Hagiwara 1/23/04

0825 Weston (T. Hagiwara) on site. Cloudy & cold ~ 15°F.

0830 At VER-2. CRA Jeff, Christy Gerges, and Nareen Agarwal are already on site. They are ~~preparing~~ VER-2 with 2 peristaltic pumps. ~~2 GRA pump~~. ~~GRA~~ will be sampling VER-2 ~~well for~~ treatability studies.

0858 Asked CRA what they are sampling the GW for.
- TOC — Ed.o! 22.E1
- TSS
- dissolved Ca, Mg & Fe
- VOCs
- PAH ~~8.FY~~ — 22.F
- PCB ~~22.15~~ — 35.8.

0905 Start sampling VER-2 in a 5 gallon plastic container (for Treatability study).

0924 Start collecting water level meas

Note: There was quite a bit of product that was purged prior to the start of sampling.

0953 At G101 area. The area of G101 has been cleared of bushes & trees. CRA was not aware of this.

1105 ~~PZ-34~~ appeared to have been bumped or something. The cap was off the pz. But was plugged back ~~of~~ PZ-34

1130 Taking a warm-up break & supply refill. The decon water bottle is frozen.

1150-200 Picked up lunch.

1/23/04

WellID	DTW	DTO	TD	Notes
VMP-5	6.33	6.32		Trace (sheen)
G101L	17.43	—	33.86	
G101D	17.44	—	41.00	
G101M	18.13	—	23.59	
G102S				Obstruction @ 2.15'
G102D	11.57	—	21.65	
G102L	10.52	—	16.70	
G104L	9.11	—	16.41	
G104D	6.11	—	10.6	
G106D	12.65	—	47.15	Odor
G106L	13.55	10.63	—	
MW1S	9.20	—	20.80	
MW2D	11.45	—	45.69	
MW2S	10.35	—	15.83	
MW3D	7.55	—	47.48	
MW3S	8.28	—	21.54	
MW4S	8.17	—	21.48	
MW4D	11.92	—	48.cc	
MW5S	11.00	10.85	—	
MW5D	~~11.5~~ 13.12	—	49.38	odor-petro
MW6S	3.53	—	11.52	
MW6D	5.93	—	46.00	—
MW7D	19.63	—	57.23	
MW7S	17.98	—	35.09	
MW8S	9.04	—	24.08	
~~MW10D~~				
SG1	24.00	—	—	
VER1	10.71	—	19.11	
PZ-33	10.84	—	17.31	Soft bottom
PZ-34	10.17	—	17.65	~~Missing~~ casing appears to have been hit - soft b
PZ-35	9.58	—	17.60	
PZ-36	8.50	—	16.10	

1/23/04

WellID	DTW	DTO	TD	Notes
PZ-37	5.48	—	15.04	
PZ-38	10.55	4.66	—	
PZ-39	5.62	—	14.68	
PZ-40	5.49	—	12.15	Odor
PZ-41	6.36	—	13.03	
P01	9.87	8.93	—	
P05				Frozen cap
P06	6.19	—	12.35	
P07	6.98	—	13.35	
P08	7.41	—	11.91	
P09	7.02	—	15.65	
P13	10.88	—	15.71	
P14	11.70	11.23	—	
P15	9.9	—	17.40	Trace product on probe
P16	12.22	—	21.25	
P19	~~12.45~~	12.95	—	17.31 = DTW
P20	12.86	8.14	—	
P24	~~13.28~~	~~10.05~~	~~bottom~~	~~bottom~~
P23	~~bottom~~	~~bottom~~	~~bottom~~	bottom
P22	~~bottom~~	~~bottom~~	~~bottom~~	~~bottom~~
P21	4.91	—	~~bottom~~	~~bottom~~
P25	~~bottom~~	~~bottom~~	~~bottom~~	Buried under pile
P26	4.84	~~bottom~~	20.84	
P28	~~bottom~~	~~bottom~~	~~bottom~~	~~bottom~~
P29	~~6.79~~	~~bottom~~	~~15.80~~	~~bottom~~
P30	~~8.35~~	~~bottom~~	15.14	
MW4D	10.70	—	47.84	
VMP-3	~~bottom~~	~~bottom~~	~~bottom~~	O.P.
P31	~~16.35~~	~~bottom~~	17.40	
P32	~~bottom~~	~~bottom~~	~~bottom~~	
VMP-9	8.01	—	13.19	

Y. Hagiwara 1/23/04

Note: CRA is collecting ~32 gals of water for treatability study (32 of 1-gal containers)

Weather at 1221 Cloudy & windy & wind from west. Snowing. yh

1513 Done collecting DTW measurements. yh

1520 Phoned Om Patel to ask him if he would like an oversight of the whole treatability study sample

1605 Walt Pochrin onsite yh

1630 Stop at ~20 gals collected. Too much oil is coming in. The plan is to come back next week and purges out the free product before sampling water yh

1635 Tried phoning Om Patel to ask if he wanted oversight Monday. CRA is planning on coming back on Monday.

1640 CRA is purging free product from VER-2. Once most of the product is purged out, it should be easier to collect water sample w/o the product problem. The plan is to start at 0930-1000 on Monday. yh

1710 Received a phone call from Om. Per Om, CRA needs to speak to EPA before proceeding w/ modified plan.

1720 Done at the site. yh

Well ID	DTW	DTO	TD	Notes
VMP-8	12.75	12.49	—	
VMP-6	6.23	~~6.23~~ —	12.97	No oil
VMP-4	10.80	—	13.53	No oil
VMP-2	~~13.45~~ 11.19		13.45	11.19 = DTW w/ oil
VMP-1	10.81	—	13.60	No oil

Y. Hagiwara

K. Hagiwara 2/3/04

0745 Weston (K. Hagiwara) on site. CRA Walt Pochron [illegible]

0800 Walt Pochron mentioned that CRA will install 2" piezometers instead of 1" piezometers. W. Pochron checked w/ RPM Scott Hansen on this (1" to 2") yesterday, and S. Hansen did not have a problem w/ this plan. — KH

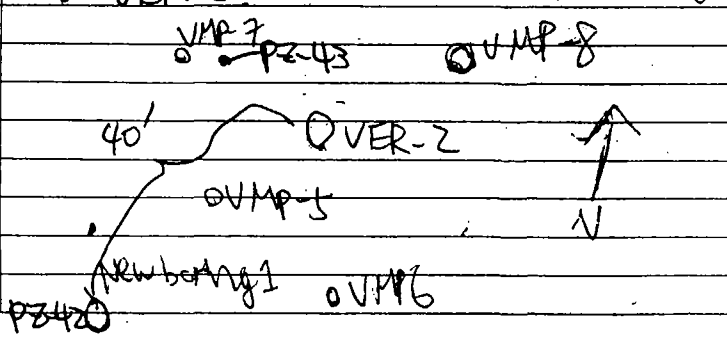
Personnel on site:
- Mike Mueller (Boart Longyear)
- Walt Pochron (CRA)
- Jeff Kolodziejski (CRA)
- Kevin Wise (Boart)

~~0813 Jeff of CRA onsite~~

0820 Health & Safety briefing
- contaminants
- Utility hazards

0825 Jeff of CRA onsite. — KH

0835 Drillers are getting set up at a boring location. CRA Jeff is getting ready to start purging at VER-2.



2/3/04

0845 DTO = ~~4.8~~ ?
DTW = 6.83 } at VER-2
TD = 17.99

0845 Start drilling at piezometer PZ-42

0850 Still drilling at PZ-42. Walt Pochron is monitoring breathing zone. CRA calibrated the PID this morning. CRA Jeff is pulling the free product into a bucket. ~4' of free product present at VER-2. — KH

0858 Asked what cal gas was used to cal PID (MiniRae) 100 ppm Isobutylene. — KH
Odor (slight) from the core.
The target depth for this piezo is ~16.5' bgs. — KH

0907 Purged about 1.5 gals of free product. Putting down new tubing for water sampling. — KH
The core is Lt yellowish brown, moist, gravelly sand — wx bedrock.

0920 Grinding on the bedrock at ~13' bgs at PZ-42. — KH

0924 ~3 gals of oil purged so far.

0930 Soil cuttings are getting lighter gray at ~15' bgs, moist. — KH
Sampling water at VER-2. — KH

0936 At 17' bgs at PZ-42. Start pulling up — KH

0940 CRA is having a problem pulling up water ~~enough~~ although they pulled out oil.

0950 Asked W. Pochron if the drum containing free product from VER-2 will be stored

inside of a secondary containment. Walt thought that the oil discussed in the e-mail was for pumptest. Drillers are getting some supplies

1005 Setting PZ-42 at 16' bgs! Sand 4-17', Bentonite 1-4' (hydrated) ——— yh

1040 Finishing up on PZ-42. Phoned Om Patel to inform him that there is no 2° containment for the drum (w/ LNAPL) ——— yh

1045 Phone conference w/ Scott Hansen. He will send out an e-mail Re: 2° containment for drums. ——— yh

1052 Informed W. Pochron (per instruction of S. Hansen) that CRA will be getting an e-mail Re: 2° containment for drums (LNAPL). ——— yh

1055 Moving & setting up at PZ-43 Note: The screens used for these location are 10. ——— yh

1100 Start drilling at PZ-43 location. ~6 gals left to sample at VER-2 for GW treatability study. ——— yh

1108 Bedrock at ~35' bgs at PZ-43. ——— yh

1110 ~1' bgs at PZ-43. The soil cuttings is Med brown (slightly yellowish) gravelly sand, slightly moist. ——— yh

Weather: Snowing and ~20°F at 0700. The temp is suppose to drop throughout the day. ——— yh

At 1130, slight sun light, snow stopped

1126 At ~13' bgs at PZ-43. W. Pochron informed that the plan for LNAPL storage is to keep LNAPL in the 5-gallon buckets used for purging, put lids on top, and set them inside the drums to have 2° containment. CRA will order overpack drums for longer-term storage of ~~LNAPL~~ LNAPL. ——— yh

1130 At ~14' bgs at PZ-43. The soil cuttings coming up is very gravelly (mostly gravel w/ <10% fines stuff) of brownish grey), gasoline odor.

1135 The PID reading jumped (spiked up to 18ppm at ~14.5' bgs. Fume came up as the auger came up ~0.5' ——— yh

1140 Hitting hard pan or something at ~15.5' bgs. ——— yh

1147 At 18' bgs. The highest PID spike at this location was 92ppm.

1147 Om Patel phoned and mentioned that the above bucket-lid/drum measure will be used as explained by Walt Pochron earlier. ——— yh

1203 Pulling out the augers from PZ-43. Strong odor coming out of the well. ——— yh

1206 Trying to see the well sand might not settle will try pouring some water to see if it will settle ——— yh

1209 The drillers will take lunch break after pouring some more water into the well ——— yh

Y. Hagiwara 2/3/04

Jeff of CRA will stay and keep sampling. —yh

1215 CRA W. Pachon & drillers off site for lunch. Jeff K. is still on site sampling. —yh

1240 CRA & Drillers back from lunch. CRA is on the last sample container for treatability study sample. —yh

1256 Checking for water/oil at PZ-42
DTO = 12.25' TOC
DTW = 15.38' TOC
CRA will not be developing PZ-42 today. They will develop PZ-42 & PZ-43 next week b/c these wells have free product. Drillers had to re-punch the boring for piezometer b/c of cave-in problem. —yh

1305 Pulling out auger. Some visible oil from on the auger. —yh
Walt P. mentioned that the tip of the probe (oil/water interface) was not covered w/ oil. The probe may have picked up something else at PZ-42. —yh
At PZ-43, the core is LT grey wet mud (that had oil). CRA is monitoring w/ PID. —yh

Note: Walt P. also mentioned that the plan is to order overpack drums for the next week. They will develop the wells by purging w/ a bailer (not pump). —yh

1310 Done sampling at PZ-43. —yh
VE-R-2.

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1311 PID reading >100 ppm or so around the auger. Stop work & let the area air out before getting back to work (continue w/ prezometer installation). —

1315 CRA is containerizing tubing in a plastic bag & packing things up. ~5 gals of oil & water purged out from VE-R-2. —

1317 Resume work. —
Screen 6.5–16.5' bgs at PZ-43

1320 PID reading spikes to ~30 ppm when the sand is being poured, but the reading is not a sustained one.
Sand 4–16' bgs
Bentonite (hydrated) 1–4' bgs —

1330 Done installing PZ-43. —

1337 Disposing of LNAPL into drum (using bucket). —

1343 CRA is pumping product out of drum (from earlier). —

1350 Drillers are getting ready to decon.

1404 Finished purging out oil from auger into a 5-gal bucket. Most of the LNAPL is double-contained inside the 5-gal bucket & a drum. —

Weather: Partly sunny temp ~ 15°F breezy

1410 Containerized PPE & tubing into a separate drum. —
Jeff of CRA off site. Board CRA is containerizing the soil cuttings.
Weston off site.
Back at VHI.

DTW meas!

Y. Hagiwara 2/16/04

1205	WESTON leave VHI.
1307	WESTON on site.
1315	Asked W. Pochron of CRA what they did with the bucket that contained LNAPL. The buckets are stored inside of a drum that also contains used PPE & tubing. They will be reusing the bucket of water again.
	Personnel Onsite
	Walt Pochron (CRA)
	Yoshie Hagiwara (WESTON)
1325	Start collecting water level measurements
	PZ-36 ~~10.06~~ 9.06' TOC (DTW) NO oil
	PZ-37 5.79' TOC (DTW) no oil
	P-21 12.76' TOC (DTW) DTO = 10.50' TOC
1333	CRA crew onsite - engineers
	- Tim Ree (CRA)
	- Tom Hobday (CRA)
	PZ-39 6.94' TOC (DTW) No oil
	PZ-42 12.52' TOC (DTW) DTO = 12.51' TOC
	P-19 17.19' TOC (DTW) DTO = 13.32' TOC
	PZ-43 DTW = 13.77' TOC DTO = 13.47' TOC
	VER-2 DTW = 16.86' TOC DTO = 12.98' TOC
	P-20 DTW = 13.07' TOC DTO = 8.43' TOC
1359	Done taking DTW & DTO measurements
1405	The water level / oil level meas are similar to yesterday's readings. Per Walt P. of CRA, the new piezometers PZ-42 & PZ-43 were developed by surging for 5-10 mins, and bailing ~5 gals of water from the wells. No ~~high~~ free product was present at the time of development. However, product is present today.

Photolog (1) 2/16/04

1	2/16/04 1406 well / piezometer config w/ PZ-43 included
2	2/16/04 1408 PZ-42 from west.
3	2/16/04 1409 Oil containing drum (LNA is containerized inside of another drum
4	2/16/04 1412 Baker tanks. The black U is set inside of a secondary contain The green backup tank)
5	2/17/04 0934 Pump, tubing & ~~trans~~ sensor in (water level ?)
6	2/17/04 1002. Setting up the pump sys (connection) at VER-2.
7	2/17/04 1003. Set up at VER-2. Fro West.
8	2/17/04 1025. Almost ready to sta test.
9	2/17/04 1100. Grundfos controller.
10	2/17/04 1154. Pump testing - step te
11	2/17/04 1241. Data loggers.
12	2/17/04 1323. ~~Flow~~ with new flow-met (0-1 gal) in line
13	2/17/04 1429. Setting up data logger for tomorrow.
14	2/18/04 0740 VER-2. Before the start of 24-hr pump test.
15	2/18/04 0741 PZ-43. Set up for 24-hr pump test.
16	2/18/04 1019 Lighting set up for to tonight's portion of pump test.
17	~~2/18/04~~ 2/19/04 0828 VER test set up. The 24-pump test is still going on but the VER set up is all ready.

Y. Hagiwara 2/16/04

~~1400~~	The baker tank - green SEVP 4848L tank.
1415	VER test crew are on site & preparing for tomorrow. — YH
1420	Checking the electrical board on the Carbon air unit. — YH
Weather;	Sunny w/ some cloud. — YH
1430	Done at the site. CRA is trouble-shooting the problem w/ electrical connection/power. They will start at 0800 tomorrow morning. — YH
1435	Phoned Om Patel and mentioned to him that. — YH

Pump test

Y. Hagiwara 2/17/04

0755	Weston (Y. Hagiwara) on site. CRA Walt Rochon, Tom Hobday & Tim Ree already on site. — YH		
Weather;	clear, sunny High expected @ 41°F ~32°F at 0700. — YH		
0810	CRA is getting ready to start work. They will take another set of DTW before starting. — YH		
		DTW (ft TOC)	DTO (ft
0815	PZ-37	~~8.45~~ 5.82'	—
	PZ-36	9.15'	—
	P-21	12.88	10.52
	PZ-42	12.55	12.54
	PZ-43	13.79	13.47
	VER-2	16.91	13.01
	TD = 17.94' TOC (VER-2)		
	P-19	17.22	13.35
	P-26	13.09	8.48
	PZ-39 = 6.96		—
0848	Done taking DTW; There is only about 1' of water in VER-2 well. — YH		
0930	Getting the connections (pump, Tubing etc.) ready for pump test. The pump is set at a 2" grundfos. — YH		
0957	Still putting all the connections on. — YH		
1023	Almost ready to start the test. — YH		
1130-1100	Lunch break. — YH		
1110	The pump controller is a digital Redi-Flo Controller. — YH		
	CRA will start the test at 1 gal/min flow rate. — YH		
	pre-test readings at measurement point. →		

Pumptest Step Test

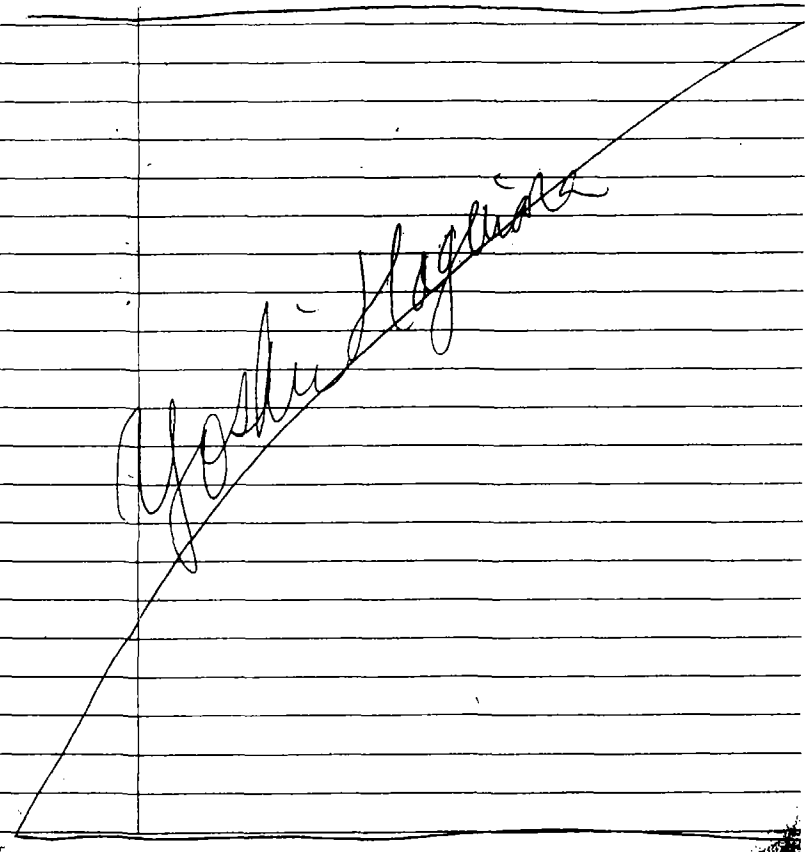
Y. Hagiwara 2/17/04

LNAPL 15.11' TOC
Water 19.06' TOC } VER-2 Pre-Test
TD = 20.10' TOC

1134 Start pumping ——— yh
1136 The pump appears to have stopped.
1137 Resume pumping. ——— yh
1142 Having a problem w/ pump control.
1145 Pumping at ~1 gal/min
1146 Resume test. ——— yh
Flow rate ~1 gal/min ——— yh
1208 flow rate ~ 0.45 gal/min ——— yh
1239 Getting quiet a bit of drawdown ~0.5' off the pump inlet (DTW)
1302 Stop the pump. Changing flow-meter (in-line) to lower flowmeter (from 1-10 gals to 0-1 gals) ——— yh
1320 Changed the flowmeter. ——— yh
1324 DTO = 15.64' TOC ——— yh
1325 Start pumping. ——— yh
1331 ~0.4 gals/min. ——— yh
1358 DTW is stabilizing around ~17.3'
CRA will start work ~0700 tomorrow morning.
Weather: ~40°F, Sunny, clear sky, v. little wind.
1415 ~~Stabilized at 17.3' at 0.4 gal/min~~
1423 At 56 minutes into the test, ~~the~~ increased the pump rate to 0.5 gals/min. DTO = 17.32' (the DTW was coning back up)
1437 DTO = 17.72' DTW Dropped ~0.4' in ~13 minutes. ——— yh
1433 DTO = 18.20 Adjusting flow rate — flow rate fluctuates at one setting.
1435 DTO = 18.29 still dropping.
1455 DTO = 18.26' ——— flow rate ~0.5 gpm

2/17

1605 DTW stabilized at ~18.33' after ~9 minutes from start, flowrate ~0.
1618 Done. 19.10 = DTW
18.33 = DTO EO test
1620 Done w/ test. Draining the line so water does not freeze overnight in line. W. Pachon is almost done setting up data logger for tom
1635 Packing up ———
1700 Done at the site. will start at to morrow. ———



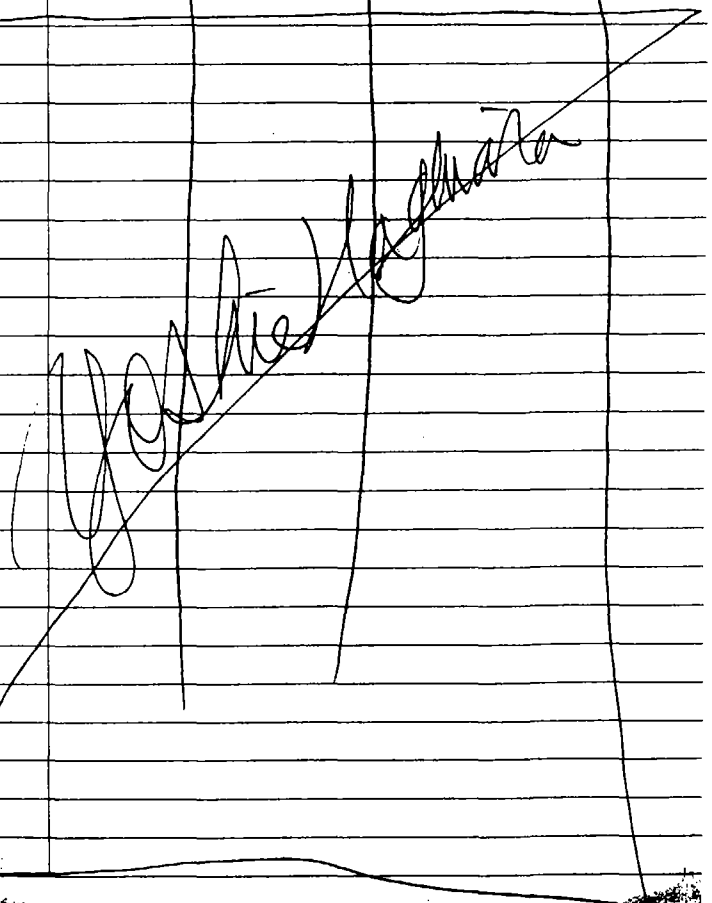
24 hr pump test Y. Hagiwara 2/18/04

0719	WESTON (Hagiwara) on site. CRA crew already on site.
	Weather: Cloudy temp expected to reach ~ 42°F Today.
	Personnel on site
	Walt Pochron (CRA)
	Tim Roe (CRA)
	Tim Leo (CRA)
	Tom Hobday (CRA)
	Christy Gerges (CRA)
	Yoshie Hagiwara (WESTON)
0737	CRA is getting set up — all connections ready, and finish taking pre-test water level measurements
0742	P-19 — 13.32 = DTO (ft TOC)
	17.15 = DTW (=)
0745	W. Pochron will re-program two of the data loggers so that data can be collected throughout (W. Pochron did not setup the data loggers (two)
0810	Finalizing the details for pump test.
0815	Pump is on
0815	Pump off. problem w/ DTO/DTW probe at P-19
0821	Restarting the Pump
0827	Test started.
0835	0.5 GPM.
0839	12 minutes elapsed
0847	DTO = 17.11 ' TOC at VER-2
	So far, seeing response at P19 PZ-42 & PZ-43
0900	Also seeing response at PZ1.
0913	Flow rate is still 0.5 GPM

Depth to Water (9:1

2/18/

Well	Initial DTO	In. DTW	Final DTO	Final DTW
P19	13.32	17.15	13.45	17.24
P20	8.42	13.80	8.49	13.19
P21	10.53	12.82	10.44	12.98
PZ42	—	12.54	~~12.38~~ NO DO	12.63
VER-2	15.39	17.60	17.38	19.65
PZ-43	14.38	14.68	14.47	14.81
PZ-36	—	9.45	—	9.36
PZ-37	—	5.81	—	5.74
PZ-39	—	7.00	—	6.90



172 Pump test - 24 hr

Y. Haggerman 2/8/04

0940 Tom H & Tim Leo off site. — yh
Christy, Tim R. & Walt are still on site.

1013 CRA is collecting DTO/DTW measurements ~ 1:45 ~~min~~ elapsed time. — yh

1017 Setting up lighting system for tonight.

1059 Taking another set up measurements (15 min. interval) flow rate ~0.55 gals.

1121 W. Pochron off site. — yh

1133 Taking last of 15 min interval measurements at 3 hrs elapsed time. flow rate ≈ 0.5 GPM

Weather: Cloudy, chilly ~32°F wind from west. Does not appear to warm up to the 40s as forecasted. — yh

1903 Taking measurements. The flow rate kept dropping to just below 0.5 gals.

1330 Christy of CRA off site. — yh

1358 Taking 330 min elapsed time reading. Flow rate = 0.57 GPM. — yh
Having a hard time keeping the flow rate constant. — yh

1423 Collecting DTW/DTO measurements. Some of the water levels have come up although the flow rate does not appear to ~~have melted off~~ to have changed. Suspecting the infilteration from snow-melt may be the cause of increased water level. — yh
(The snow has been melting since ~ 1200 today and part of yesterday).

1520 W. Pochron on site. — yh

1527 Taking 7 hr measurements. DTO = 17.77 DTW = 19.03 at MW-2

Y. Haggerman 2/8/04

1540 Done collecting 7 hr elapsed time reading. — yh

~~1550~~ Walt Pochron went off site (1520 ~~hrs~~) to pick up batteries, etc. — yh

1548 Done for the day (WESTON)
The pump test is still continuing

[redacted]

Pump test / VER test

S. Hagiwara 2/19/04

0740	Hagiwara on site. CRA is filling the tank for VER testing. The pump test is almost done. —— yh
0755	Taking DTW/DTO measurements at VMP wells. —— yh Water is in the VMP wells. —— yh
Personnel:	Walt Pochron (CRA) Tom Hobday (CRA) Tim Roe (CRA)
Weather:	Cloudy partly sunny High expected ~45°F No wind at 0755.
0757	Filling out two empty, clean drums (unused) w/ decon water. They will use the drum water for decontaminating VER system after the test. —— yh
0802	VMP-8 contains free product All of the VMP wells have water (VMP-5, 6, 7 & 8) at ~ 5–6' bgs. The piezometers show water levels deeper. There may be a purched aquifer on top — not necessarily site-wide, but localized?? —— yh
0807	VMP-8 DTO = 12.67' TOC DTW = 13.00' TOC TD = 13.11' TOC VMP-5 DTW = 7.07' TOC TD = 13.50' TOC VMP-6 DTW = 7.27' TOC TD = 12.91 ' VMP-7 DTW = 8.98' TOC TD = 13.14
0817	Discussing the plan for VER test They will start at max. vacuum. —— yh
0830	Taking 24 hr elapsed time measurements before turning the pump off. Flow rate ≈ 0.5 GPM. —— yh

Photo log (2)

18	2/19/04 0844 P-20 with cap on (for VER test). ——
19	2/19/04 1005 VER testing. ——
20	2/19/04 1007 Monitoring outflow during VER testing. ——
21	2/19/04 1013. Taking VP measurement at VMP-5. ——
22	2/19/04 1044 Quiet bit of free product is drawn out VER-2. ——
23	2/19/04 1101. Two flow meter attached to grundfos outlet. ——
24	2/19/04 1310. Collecting Summa-can air sample from the discharge area (air outlet. ——
25	Same as above, from further away.
26	2/19/04 1325. Decontaminating data log at P-20. ——
27	2/19/04 1334. Downloading data from P-20 data logger. ——

Done w/ Camera 1

S. Hagiwara

Y. Hagiwara 2/19/04

At VER-2 2th readings were as follows. DTO = 17.38' from meas. point
DTW = 19.65' " "

0910 A CRA person dropped off a peristaltic pump and some tubing. CRA will de-water the VMP wells before starting the VER test. Pump is still on (for 24-hr pump test). CRA will stop the grundfos only after the de-watering task is completed so that the recharge can be monitored.

[redacted]13 Purging VMP-7.

[redacted]54 Purging VMP-5. ~1.5 gals of water was purged from VMP-7.

0929 Done purging VMP-5. ~1.5 gals of water (surface) was purged.

0932 Tim is taking initial pressure at VMP-5.

13 0940 Getting calibration record for air monitoring instruments.
PID (photoVAC-PE)
FID (Micro FID) rented from IE monitoring instruments (Total Organic)
Lantec GEM 500. (CO_2, CO, O_2)
CRA will also monitor using Draeger as necessary (VC)
50% methan 50% CO_2 GEM 500
(calibrated at ~~0500-0700~~ 0700
FID 100 ppm CH_4
PID 100 ppm Isobutylene

0945 Calibrating Draeger tube (VC)

13 0945 Done purging VMP wells. VMP-8 well containing mostly oil (all purged out). VMP-8 appears to be the only well that is

Y. Hagiwara 2/1

hydrologically connected (freely with any problem) to the contaminated aq
There appears to be some sort of a barrier over VMP-5, 6 and 7.
VMP-5, 6 and 7 line up (relatively) N
to SE angle. VMP-8 & VER-2 line u
ENE-WSW angle.

0954 Pump (2" grundfos used for pumptes is still on.
Checking background PID readings 0.0 ppm

1001 Start VER test. ~~Meas. DTO at VER 2 was DTO =~~ Adjusting the inner tube (dr tube) to ~~m~~ accomodate for water le change.

1004 Sucking on a little bit of liquid
1007 Raised the drop tube up higher.
Checking vacuum pressure at P2-

1009 Vacuum observed at VMP-8 & P-20.
Posity VP at VMP-7.
Grundfos pumping at ~0.5 gal/min.

1013 Per CRA, drawing a lot of water t the well. P-20 is showing the be response so far at ~ -2.1 mm H_2 drop tube at 17.5' ~ water table dur the pump test.

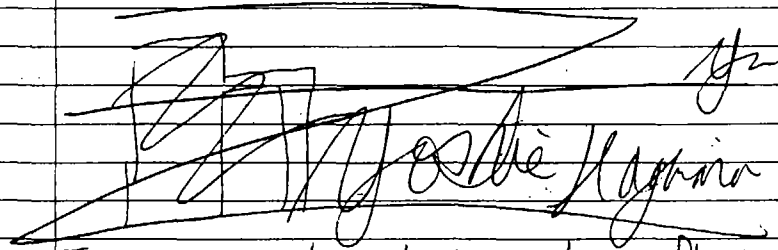
1026 Not getting discharge b/c hardly any a is coming out of the aquifer.

1037 Only water is coming out ~3GPM coming into the air/water unit.
~0.5 GPM on the grundfos. Total c 3.5 GPM. -4.0 mm H_2O at P-20 & -3.5 mm H_2O at VMP-8. No influence o

Y. Hagiwara 2/19/04

other wells. CRA is considering the following options
① Lower vacuum
② Raise the bottom of drop tube so that the vacuum mostly pulls air and pump (grundfos) pulling water out.

1048 Stopped the pump discharging from the Carbon air unit. There was small leak in line. Tape it up w/ duct tape



1053 Trying to attach a larger volume flow meter.

1105 Tom Hobday off site to checkout from the hotel. CRA is waiting for a call back from senior engineer regarding how to proceed.

1115 Increased the pump (grundfos) rate to ~3 GPM. All the other settings are about the same.

1120 A lot less drawdown in water going through the air/water tank.

1200 No change in response (VP).

1210 Taking VP readings.

1216 Getting ready to collect Summa-Can sample.

Response observed only at P-20 & VMP-8

Y. Hagiwara 2/19/

1226 Checking discharge (air emission) the flow rate is ~ the same 1.5-2.0 ~~cfm~~ with VP = -9" H2O at VMP

1234 After speaking to the project engineer over the phone, CRA decided that they will continue the VER test for 8 hrs (~1800).

1240 Phoned Om Patel to let him know that CRA is planning on continuing the test until ~1800.

1307 No change in VP. Change of plan. CRA will continue VER testing until ~160 instead of 1800. They will continue to recharge test after the VER test.

Late entry: CRA started collecting Summa-Can sample at ~1240.
The sample collection is an hour-(regulated) sampling Method TO-14.

1318 Asked Walt Pochron the plan for disposal water etc. Beaver (a contractor) will haul the carbon-filtered water as non-hazardous water.

1322 Phoned Om Patel to ask if it would be necessary to be on site to watch CRA skim LNAPL out of the Baker tank. Yes. Mentioned this to CRA. They are not sure if it is going to happen tomorrow or not.

Note: Vacuum was stabilized at ~1130.

1420 VER testing is still going on and W. Pochron is downloading data from Data Loggers. (from 24-hr pump test)

Y. Hagiwara 2/19/04

1517	~~P~~ VER pilot test is still going on. No major changes so far. —— yh
1530	CRA is packing up some of the equipments etc. that are not used for VER testing. —— yh All the data loggers except for the nearby (to VER-2) wells are decontaminated and put away. —— yh
1550	Asked CRA what the plan was for shutting down the system. ~~They~~ They will first turn down the grundfos pump rate to a 5gals min, and turn off the vacuum. Once the vacuum is off, they will keep pumping (w/ grundfos) until the DTW stabilizes back to the original DTW before the start of VER testing (stabled DTW at constant rate pumping at 05 GPM). They will move to recharge test once the original DTW stabilization occurs by turning the pump off. —— yh
1601	Collecting last set of measurements before terminating the test. —— yh

Final vacuum readings — vacuum reading ~21" Hg

VMP-5	+5.6 in H_2O
VMP-6	+16.9
VMP-7	+1.5
VMP-8	5.4
P19	0.0
P20	3.2
P21	0.0
P42	0.0
P43	0.0

~~VER-2~~ yh

Photo log

1	2/19/04 1523 Photo of digital manometer used for measuring VP. ——
2	2/19/04 1525 VER test set up. ——
3	2/19/04 1619 Decontaminating vacuum unit (tank etc) with Alconox water & water. ——
4	2/20/04 0800 Oil (LNAPL) contained/stored inside of double casing ——
5	2/20/04 0942 Checking oil level in the ta
6	3/2/04 1004 set up for water filteration. Wetting the carbon un
7	3/2/04 1037 Carbon filter unit (bulged up at the top)
8	3/2/04 1038 water tank and hosing out of the carbonair unit
9	3/2/04 Trash pump attached to the outlet of the tank. —— (1014 0)
10	3/2/04 1252 Sampling tank water to
11	3/2/04 1315 Pumping out the water from contai nment (thru the filter) ——
12	3/2/04 1517 Pressure wash system. ——
13	3/2/04 1525 Pressure-washing the inside of the tank ——
14	3/2/04 1615 Containment (tank) after ~~pumping~~ emptying. —— yh
15	4/2/04 The pressure washer unit. o
16	4/2/04 0855 Decontaminating. ——
17	4/2/04 0911 Decontaminating w/ pressure washer. ——
18	4/2/04 1025 skimming LNAPL from purge/decon water. ——
19	4/2/04 1032 Transferring water (decon from the drum inside of Barn to drums or

2/19/04

1610	Turning Vacuum pump off. — yh
1638	Having a difficult time decontaminating the tank. — yh
1654	Still trying to decon the tank (Carbon air). W. Pochon getting ready to start monitoring recovery. Pump is still on (grundfos). — yh
1657	Start recovery test. — yh
1658	Recovery test Initial DTO = ~~17.44~~ 17.80 / TOC At 5 min 16.28 / TOC At 10 min 15.88 / TOC At 20 = 15.58 / TOC
1740	Done w/ recovery test. — yh
1750	CRA is packing up. Almost done draining LNAPL out of the Carbon air tank / Decon. — yh
1800	Done at the site. CRA is still downloading some data (data loggers from PZ-43 & VER-2) and packing up the Carbon air unit. ~~They~~ yh CRA containerized some of the LNAPL that came out of the tank into a drum across the street (2 yh double containerized). — yh

LNAPL separation & containerization — Y. Hagiwara — 2/20/

0750	WESTON (Y. Hagiwara) on site. —
Weather:	Raining ~ 35°F at ~~0750~~ 0700 High expected ~ 50°F. —
Personnel:	Walt Pochron (CRA) Y. Hagiwara (WESTON)
0800	Tim Leb (CRA) on site. —
	Per W. Pochran, they will finish c up while the rain is coming down ha They will go to purge the ~~pumps~~ tu if the rain subsides. There is a chance they will postpone skimming of LNAPL until next week when the weather is better. CRA left grund pump soaking in Alconox water over to make it easier to decontamin
0815	Getting ready to decon pump. —
0840	CRA is organizing their field vehicle so that the rest of the equipments can fit back inside. —
0930	Containerizing all used pipes & decon water (with sheen). —
	The plan is to use "SPILL SOCK" to extr oil out of the tank. —
0941	Taking oil (thickness measurement of t Baker tank ~ 1/100" —
0947	Checking oil level w another probe. Jus make sure, ~ 1/100" —
0947	Baker tank on site to pick up the back tank (Green, single-walled). —
0960	CRA's new plan is to get some oil absor pads and put them in the tank over the weekend, and pull them out nex week - not enough oil to try and pump out. —

2/20/04

0955 Phoned Om Patel To inform CRA's plan to leave the Oil Absorbent booms and pull them out sometime next week. — Yh
WESTON is done for the day.
1005 WESTON off site. — Yh
1110 Back at VHE. — Yh

Y. Hagiwara 3/2/04

0900 Hagiwara leave for site. —
0935 Hagiwara on site. CRA is already on site. —
Weather: Cloudy, partially sunny. Temp in the 40's —
Personnel: Jeff Kolodziejski (CRA)
Tim Lee (CRA)
Yoshie Hagiwara (WESTON)
0940 CRA is hooking up all the necessary tubing (hose) to the carbon filtration unit & tank. Also drawing a hose from clean water source toward the tank. —
1004 Testing the trash pump and prepping the carbon filter tank before the water hauler comes on site.
1008 The top of the filter drum bulged up during the test pumping. —
The water hauler is still not on site.
The water came out of the outlet (that) of the carbon unit was released to the containment (~1/gals). Sheen is observed on the surface of water in the containment (some rain water remains from yesterday's rain). The water from the containment should be purged out and containerized. —
1020 Still waiting for the waste water hauler
1030 Beaver oil on site. —
1036 Start pumping (trash pump) —
1047 Still pumping water through the filtration unit. The drum (Carbon) appears to be bulging out more. —

Y. Hoglund 3/2/04

1057	Jeff is checking to see ~~if~~ how many drums (empty) are on site.
1115	Still pumping. YH
1142	Still pumping. YH
1201	Still pumping. YH
1225	Still pumping. YH
1234	~ half way. CRA will stop the pump and sample the tank water (pre-filter) in a little bit. YH They will be sampling for
1250	Stopped the pump. Unscrewing the connections. YH They are going to fill 2 - 40 mL bottles w/ sulfuric acid preservative and 3 - 40 mL vials w/ HCl. YH (Total of 5 vials of 40 mLs)
1254	CRA is done sampling. No ice in the cooler. Outside temp ~ 35°F. YH
1257	Resume pumping. CRA is going to get ice. Jeff of CRA is going off site to get some ice. YH Tim G is still on site. YH
1318	CRA Jeff back on site. YH
1347	Still Pumping. ~1/4 of the tank left to pump. YH
1410	Still pumping. YH
Late entry:	Forgot to note that the earlier water samples were iced when Jeff of CRA came back on site w/ ice. YH
1428	Pete Tameling on site. YH
1430	Pete Tameling off site. YH
1500	Still pumping. YH

Y. Hoglund 3/2/04

1506	Stop the pump. YH
1510	Pumping water out of the 2ndary containment (Mostly rainwater) YH
1515	While pumping contaminated water out, Jeff will pressure wash the tank. Alconox first (~5 gals) And then water rinse. YH
1525	Pressure washing inside the tank. YH
1529	Problem w/ the pressure washer/pump the generator portion is not working well (trash pump). CRA will postpone washing ~~the~~ inside the tank. YH Per CRA, they will clean/decon the tank at a later date since the pump is not working. YH
1608	Stop pumping. Per Tim of CRA, the tank decon & discarding the carbon filter drum. YH
1615	Packing up hose etc. (pump) 2,900 gals of wastewater was generated & hauled away by Beaver. YH
1616	Jeff of CRA off site. YH
1625	Beaver off site (after Manifest)
1627	WESTON off site. YH

Yoshie Hoglund

188 Tank clean up decon

Y. Hagiwara 3/12/04

0815	WESTON (Y. Hagiwara) on site. CRA is not on site yet.
0820	CRA Tim Leo on site. CRA truck is not here yet.
Weather:	Sunny, some clouds ~20°F breezy
0830	CRA the other field member not on site yet.
0840	CRA 2nd field crew is still not on site. Asked Tim Leo about the other team member. Jeff Kolodziej does not have a cell phone. He is not sure where Jeff is.
0853	Jeff of CRA on site.
0900	Trying to open the outlet valve of the tank. It is frozen and cannot be opened.
0905	Checked the fluid inside the tank. There is ~3" of water/oil in the tank that is frozen. It looks like CRA is going to discontinue the effort to decon the tank today. It also appears that the site received some rain over the week, there is quite a bit of water in the containment (tank). This is also frozen at the top.
0910	Tim Leo of CRA is phoning the site manager, Walt Pochron.
0912	CRA informed that they are not performing any field activities today. They will reschedule the decon activity later when the

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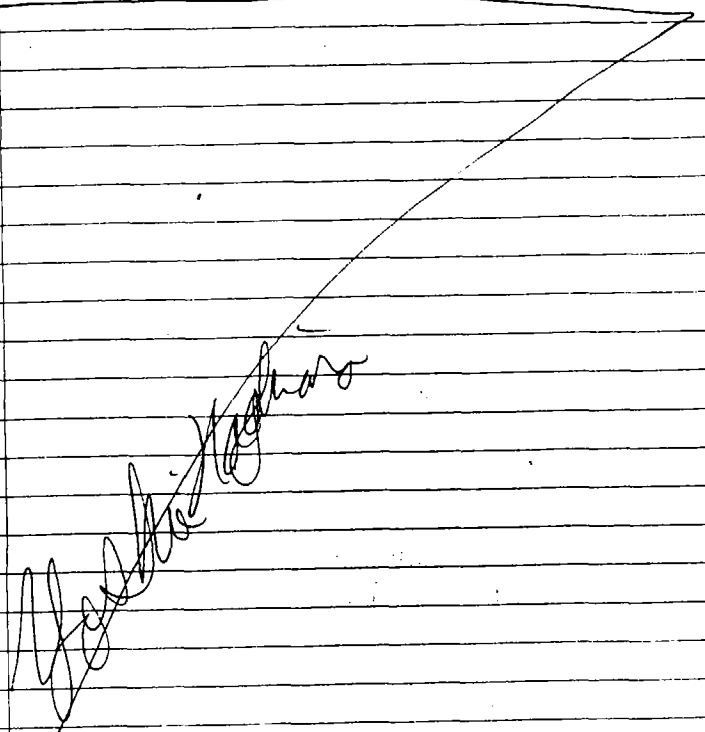
Y. Hagiwara 3/12/04

	weather is warmer.
0916	WESTON off site.
1035	Back at WI. End of day.



Tank Cleanup (decon) Y. Hagiwara 4/2/04

0815 Y. Hagiwara of WESTON on site. CRA is not on site yet.

Weather: Sunny ~31°F at 0700. High ~50°F

0825 CRA on site (Jeff Kolodziejski). The other CRA member is not on site yet.

The containment (of tank) has a lot of rain water.

The plan is to containerize the tank decon water (after filteration) and the ponded water in the containment in a drum

0839 Tim Leo of CRA on site.

Setting up to start.

0845 The decon water will not be filtered before containerization.

0855 Mixing some soapy water (Alconox)

0856 Start decontamination of tank.

1005 Done purging 2-55 gal tank worth of decon fluid. The water is still brown. CRA is driving the two drums (full) back to the site. They will ~~pick up some more empty drums~~. They will pump out the decon water using a trash pump.

1023 CRA is skimming oil layer (on top) from one of the drums. They will try to containerize the oil separate from the rest of decon water.

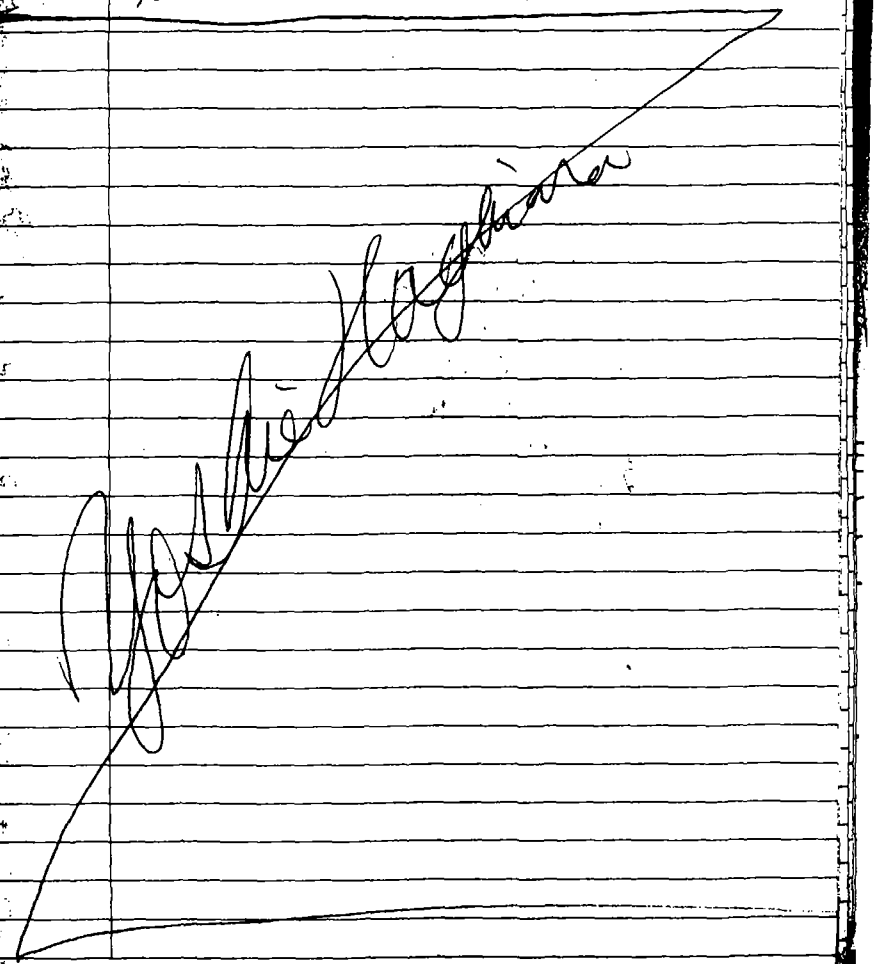
1026 ~1.5 gals of LNAPL was separated.

1045 Having a hard time drawing the LNAPL out of the tank.

Photolog 4/2/04

20 4/2/04 1122 Trying to get the LNAPL out of the tank. Some of the LNAPL leaked while trying to contain in the pink tub.

21 4/2/04 1213. The water/oil mixture in the tank containment. The brownish (and white) fluid floating on top is LNAPL.



J. Hagstrom 4/2/04

1050 CRA will drop the trash pump down inside of the tank. JH

1120 Pulled out the trash pump. Open the outside value to get the LNAPL out. Could not pump all of the LNAPL from the inside. JH

1137 CRA will be dropping the pump back down into the tank. JH

1149 Stop pumping. CRA cannot get any more fluid out of the tank.

1152 Done w/ the tank. Pumping the water/oil mix out of the containment.

1205 Decontaminating a trash pump JH

1210 Decontaminating buckets. JH
CRA will not be doing anything with the water in the containment. CRA does not have enough drums to purge out all the water. JH

1216 CRA is still decontaminating the hose and bucket used today.

1220 Packing up. JH

1225 Phoned Om Patel and reported to him that CRA is going to leave the water in the containments. They do not have enough drums to containerize all the water. Om Patel will discuss this w/ Scott Hansen of EPA. JH

1230 CRA is pumping water/oil out of the drums inside the van. JH

1238 Done pumping & transferring the decon water into drums. JH
Securing the drums w/ lids. JH

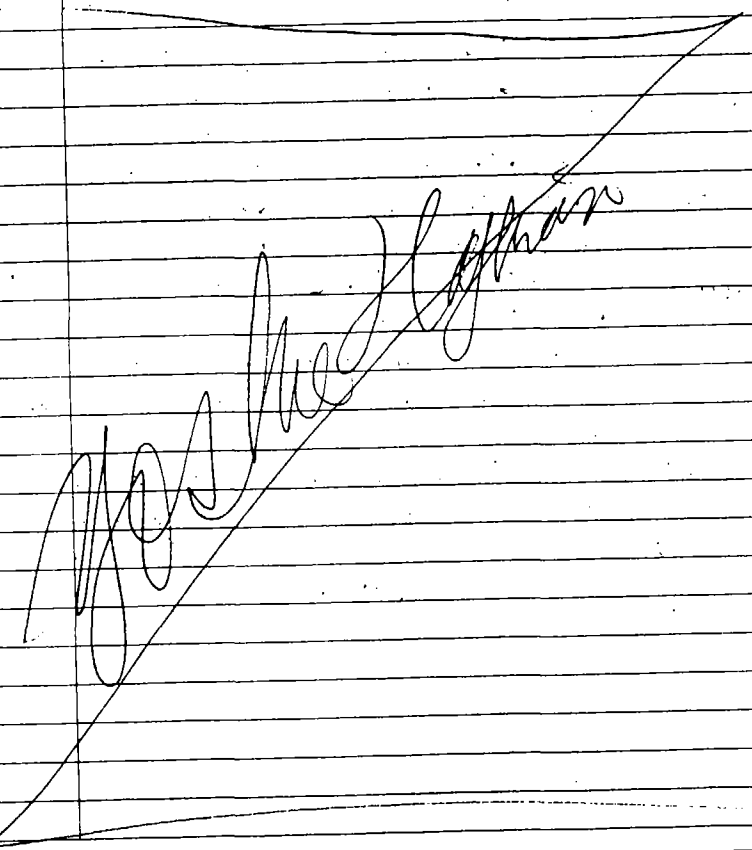
4/2/04

1250 CRA back on Tameling property. They are decontaminating the trash pump used to transfer decon water. JH

1280 Receive a call from Om Patel. He will send out an e-mail to the EPA regarding the water in the containment. Thought clarify some of the issues for him.

1300 Packing up the pressure washer.

1310 Done at the site. Offsite



4-7-04 SUN, 63°

0800	RM on-site
	Meet w/ Jeff K. - Tim Leo - CRA - No safety talk
Photo 0825	Connect water hose, pump, generator to wash down secondary containment floor.
Photo 0910	Tanker arrives, Beaver Oil - Hodgekins, IL. Begin pumping liquid into tanker
0915	Jeff K. skimming oil product from tops of drums stored north side of Jeans Road, transferring to oil overpack drums.
1030	continue to pump water in containment through carbon filter (55-gal drum) to tanker, ~ 600 gal
Photo 1300	Finish collecting water from containment, move to north side
1320	Walter Pochon on-site CRA
	No valve for carbon filter pack, Walter drive to get valve/nipple.
~~1400~~ 1530	start pumping water from 500-GAL green poly tank and drums containing purge / decon / development water.
1530	Continued problems w/ pump.
1610	Walter arrives w/ new pump
1705	transfer of water finished ~ 200 gal, total = 800 gallons
1715	RM leave site

R.M. 4.7.04